February 3, 2003

RE: Stellite Coatings 039-15682-00078

TO: Interested Parties / Applicant

FROM: Paul Dubenetzky
Chief, Permits Branch
Office of Air Quality

Notice of Decision: Registration

Please be advised that on behalf of the Commissioner of the Department of Environmental Management, I have issued a decision regarding the enclosed matter. Pursuant to IC 4-21.5-3-4 (d) this order is effective when it is served. When served by U.S. mail, the order is effective three (3) calendar days from the mailing of this notice pursuant to IC 4-21.5-3-2(e).

If you wish to challenge this decision, IC 4-21.5-3-7 require that you file a petition for administrative review. This petition may include a request for stay of effectiveness and must be submitted to the Office of Environmental Adjudication, ISTA Building, 150 W. Market Street, Suite 618, Indianapolis, IN 46204, **within (18) eighteen days of the mailing of this notice**. The filing of a petition for administrative review is complete on the earliest of the following dates that apply to the filing:

(1) the date the document is delivered to the Office of Environmental Adjudication (OEA);
(2) the date of the postmark on the envelope containing the document, if the document is mailed to OEA by U.S. mail; or
(3) the date on which the document is deposited with a private carrier, as shown by receipt issued by the carrier, if the document is sent to the OEA by private carrier.

The petition must include facts demonstrating that you are either the applicant, a person aggrieved or adversely affected by the decision or otherwise entitled to review by law. Please identify the permit, decision, or other order for which you seek review by permit number, name of the applicant, location, date of this notice and all of the following:

(1) the name and address of the person making the request;
(2) the interest of the person making the request;
(3) identification of any persons represented by the person making the request;
(4) the reasons, with particularity, for the request;
(5) the issues, with particularity, proposed for consideration at any hearing; and
(6) identification of the terms and conditions which, in the judgment of the person making the request, would be appropriate in the case in question to satisfy the requirements of the law governing documents of the type issued by the Commissioner.

If you have technical questions regarding the enclosed documents, please contact the Office of Air Quality, Permits Branch at (317) 233-0178. Callers from within Indiana may call toll-free at 1-800-451-6027, ext. 3-0178.

Enclosure

INDIANA DEPARTMENT OF ENVIRONMENTAL MANAGEMENT
We make Indiana a cleaner, healthier place to live.

Frank O'Bannon
Governor

Lori F. Kaplan
Commissioner

100 North Senate Avenue
P. O. Box 6015
Indianapolis, Indiana 46206-6015
(317) 232-8603
(800) 451-6027
www.state.in.us/idem

February 3, 2003

Mr. David Muir
Stellite Coatings
1201 Eisenhower Drive North
Goshen, Indiana 46526

Re: Revised Registered Construction and Operation Status,
039-15682-00078

Dear Mr. Muir:

The application from Stellite Coatings, received on May 30, 2002, has been reviewed. Based on the data submitted and the provisions in 326 IAC 2-5.5, it has been determined that the following emission units, located at 1201 Eisenhower Drive North, Goshen, Indiana, 46526 are classified as registered:

(a) One (1) air melt atomization tower, constructed in 1990, with a maximum capacity of 800 pounds per hour, equipped with a product cyclone that is considered integral to the process, controlled by Baghouse DC1.

(b) One (1) fume hood, constructed after 1990, with a maximum process rate of less than 100 pounds per hour, controlled by Baghouse DC2.

(c) One (1) vacuum melt atomization tower, constructed in 1990, with a maximum capacity of 175 pounds per hour, equipped with a product cyclone that is considered integral to the process, controlled by Baghouse DC3.

(d) One (1) Cobalt classifying operation, constructed in 1990, with a maximum process rate of 975 pounds of metal per hour, controlled by Baghouse DC4.

(e) One (1) Iron/Nickel classifying operation, constructed in 1990, with a maximum process rate of 975 pounds of metal per hour, controlled by Baghouse DC5.

(f) One (1) castable rework operation, constructed in 1990, with a maximum process rate of less than 100 pounds per hour, controlled by Baghouse DC6.

(g) One (1) welding application and testing facility, constructed in 1990, with a maximum process rate of less than 100 pounds per hour, controlled by Baghouse DC7.

(h) One (1) spray booth, identified as Booth A, constructed in 2002, using a powder coating process, with a maximum coating usage of 20 pounds per hour and a maximum throughput rate of 24 pounds of parts per hour, controlled by Baghouse DC8. This booth is located in the Research and Development Laboratory and is used only for experimental study and testing. The total spray time of Booth A is less than 1,143 hours per year.

(i) One (1) spray booth, identified as Booth B, constructed in 2002, using a powder coating process, with a maximum coating usage of 10 pounds per hour, controlled by Baghouse DC8. This booth is located in Quality Control Laboratory and is used only for experimental study and testing. The total spray time of this booth is less than 1,095 hours per year.

The following conditions shall be applicable:

1. Pursuant to 326 IAC 5-1-2 (Opacity Limitations) except as provided in 326 IAC 5-1-3 (Temporary Alternative Opacity Limitations), opacity shall meet the following:

   (a) Opacity shall not exceed an average of forty percent (40%) in any one (1) six (6) minute averaging period as determined in 326 IAC 5-1-4.

   (b) Opacity shall not exceed sixty percent (60%) for more than a cumulative total of 15 minutes (60 readings) in a 6-hour period as measured according to 40 CFR 60, Appendix A, Method 9 or fifteen (15) one (1) minute nonoverlapping integrated averages for a continuos opacity monitor in a six (6) hour period.

2. Pursuant to 326 IAC 6-3-2 (Manufacturing Processes)

   (a) Pursuant to 326 IAC 6-3-2(e), the allowable particulate emissions from the air melt atomization tower shall not exceed 2.22 lbs/hr when the process weight rate is 800 lbs/hr.

   The pounds per hour limitation was calculated with the following equation:

   Interpolation of the data for the process weight rate in excess of sixty thousand (60,000) pounds per hour shall be accomplished by use of the equation:

   $E = 4.10\ P^{0.67}$ where E = rate of emission in pounds per hour and P = process weight rate in tons per hour

   (b) Pursuant to 326 IAC 6-3-2(e), the allowable particulate emissions from the vacuum melt atomization tower shall not exceed 0.8 lbs/hr when the process weight rate is 175 lbs/hr. The pounds per hour limitation was calculated with the equation in (a).

   (c) Pursuant to 326 IAC 6-3-2(e), the allowable particulate emissions from the cobalt classifying operation shall not exceed 2.53 lbs/hr when the process weight rate is 975 lbs/hr. The pounds per hour limitation was calculated with the equation in (a).

   (d) Pursuant to 326 IAC 6-3-2(e), the allowable particulate emissions from the iron/nickel classifying operation shall not exceed 2.53 lbs/hr when the process weight rate is 975 lbs/hr. The pounds per hour limitation was calculated with the equation in (a).

   (e) Pursuant to 326 IAC 6-3-2(e)(2), the allowable particulate emissions from each of the fumehood, the castable rework, and the weld application shall not exceed 0.551 lbs/hr.

   (f) Pursuant to 326 IAC 6-3-2(e), the allowable particulate emissions from each of the spray coating booths (Booths A and B) shall not exceed the pounds per hour limitation calculated with the equation in (a).

3. Pursuant to 326 IAC 2-5.5 (Registrations), the product cyclones associated with both atomization towers must be in operation when the towers are in operation, as they are considered integral part of the process.

This registration is a revised registration issued to this source. The source may operate according to 326 IAC 2-5.5.

An authorized individual shall provide an annual notice to the Office of Air Quality that the source is in operation and in compliance with this registration pursuant to 326 IAC 2-5.5-4(a)(3). The annual notice shall be submitted to:

Compliance Branch
Office of Air Quality
100 North Senate Avenue
P.O. Box 6015
Indianapolis, IN 46206-6015

no later than March 1 of each year, with the annual notice being submitted in the format attached.

An application or notification shall be submitted in accordance with 326 IAC 2 to the Office of Air Quality (OAQ) if the source proposes to construct new emission units, modify existing emission units, or otherwise modify the source.

Pursuant to Contract No. A305-0-00-36, IDEM, OAQ has assigned the processing of this application to Eastern Research Group, Inc., (ERG). Therefore, questions should be directed to Yu-Lien Chu, ERG, 1600 Perimeter Park Drive, Morrisville, North Carolina 27560, or call (919) 468-7871 to speak directly to Ms. Chu. Questions may also be directed to Duane Van Laningham at IDEM, OAQ, 100 North Senate Avenue, P.O. Box 6015, Indianapolis, Indiana, 46206-6015, or call (800) 451-6027, press 0 and ask for Duane Van Laningham, or extension 3-6878, or dial (317) 233-6878.

Sincerely,

Original Signed by Paul Dubenetzky
Paul Dubenetzky, Chief
Permits Branch
Office of Air Quality

ERG/YC

cc: File - Elkhart County
Elkhart County Health Department
Air Compliance - Tony Pelath
Northern Regional Office
Permit Tracking - Sara Cloe
Technical Support and Modeling - Michele Boner
Compliance Branch - Karen Nowak

Registration
Annual Notification

This form should be used to comply with the notification requirements under 326 IAC 2-5.5-4(a)(3).

Company Name:	**Stellite Coatings**
Address:	**1201 Eisenhower Drive North**
City:	**Goshen, Indiana 46526**
Authorized individual:	**David Muir**
Phone #:	**(219) 534-8818**
Registration #:	**039-15682-00078**

I hereby certify that Stellite Coatings is still in operation and is in compliance with the requirements of Registration 039-15682-00078.

Name (typed):
Title:
Signature:
Date:

Indiana Department of Environmental Management
Office of Air Quality

Technical Support Document (TSD) for a Revised Registration

Source Background and Description

Source Name:	Stellite Coatings
Source Location:	1201 Eisenhower Drive North, Goshen, Indiana 46526
County:	Elkhart
SIC Code:	3370
Operation Permit No.:	039-15682-00078
Permit Reviewer:	ERG/YC

The Office of Air Quality (OAQ) has reviewed an application from Stellite Coatings relating to the operation of a metal powder manufacturing plant.

History

On May 30, 2002, Stellite Coatings submitted an application to the OAQ requesting to install and operate two (2) spray coating booths as laboratory testing units for metal powder coating applications. An additional baghouse DC8 will be installed to control the emissions from these two (2) spray booths. Stellite Coatings was issued a Registration #039-15682-00078 on August 7, 2001. The potential to emit before control of each criteria pollutant after this modification is still less than 25 tons per year. Therefore, a revised registration will be issued to this source.

Permitted Emission Units and Pollution Control Equipment

The source consists of the following permitted emission units and pollution control devices:

(a) One (1) air melt atomization tower, constructed in 1990, with a maximum capacity of 800 pounds per hour, equipped with a product cyclone that is considered integral to the process, controlled by Baghouse DC1.

(b) One (1) fume hood, constructed after 1990, with a maximum process rate of less than 100 pounds per hour, controlled by Baghouse DC2.

(c) One (1) vacuum melt atomization tower, constructed in 1990, with a maximum capacity of 175 pounds per hour, equipped with a product cyclone that is considered integral to the process, controlled by Baghouse DC3.

(d) One (1) Cobalt classifying operation, constructed in 1990, with a maximum process rate of 975 pounds of metal per hour, controlled by Baghouse DC4.

(e) One (1) Iron/Nickel classifying operation, constructed in 1990, with a maximum process rate of 975 pounds of metal per hour, controlled by Baghouse DC5.

(f) One (1) castable rework operation, constructed in 1990, with a maximum process rate of less than 100 pounds per hour, controlled by Baghouse DC6.

(g) One (1) welding application and testing facility, constructed in 1990, with a maximum process rate of less than 100 pounds per hour, controlled by Baghouse DC7.

Unpermitted Emission Units and Pollution Control Equipment

There are no unpermitted facilities operating at this source during this review process.

New Emission Units and Pollution Control Equipment Receiving Prior Approval

(a) One (1) spray booth, identified as Booth A, constructed in 2002, using a powder coating process, with a maximum coating usage of 20 pounds per hour and a maximum throughput rate of 24 pounds of parts per hour, controlled by Baghouse DC8. This booth is located in the Research and Development Laboratory and is used only for experimental study and testing. The total spray time of Booth A is less than 1,143 hours per year.

(b) One (1) spray booth, identified as Booth B, constructed in 2002, using a powder coating process, with a maximum coating usage of 10 pounds per hour, controlled by Baghouse DC8. This booth is located in Quality Control Laboratory and is used only for experimental study and testing. The total spray time of this booth is less than 1,095 hours per year.

Note: These units are used for experimental study and testing only. Therefore, the installation of these units are considered laboratory activities and are exempt from permitting requirements, pursuant to 326 IAC 2-1.1-3(e)(3). However, this modification is not considered a "notice-only change" because the potential to emit chromium exceeds 1 ton per year, and the potential to emit total hazardous air pollutants (i.e., chromium, nickel and cobalt) is greater than 2.5 tons per year under 326 IAC 2-5.5-6(d).

Existing Approvals

The source has been operating under previous approvals including, but not limited to, the following:

Registration 039-14366-00078, issued on August 7, 2001.

All conditions from previous approvals were incorporated into this permit.

Air Pollution Control Justification as an Integral Part of the Process

The company stated that the powder collected from the cyclones associated with the air melt atomization tower (DC-1) and the vacuum melt atomization tower (DC-3) represents 100% of the primary products that Stellite Coatings sells. IDEM, OAQ has evaluated the justifications and agreed that the cyclones will be considered as an integral part of the metal powder production. This justification was made in the review of Registration 039-14366-00078, issued on August 7, 2001 and has not changed.

Enforcement Issue

There are no enforcement actions pending.

Recommendation

The staff recommends to the Commissioner that the operation be approved. This recommendation is based on the following facts and conditions:

Unless otherwise stated, information used in this review was derived from the application and additional information submitted by the applicant.

An application for the purposes of this review was received on May 30, 2002, with additional information received on September 13, 2002, and November 21, 2002.

Emission Calculations

See Appendix A of this document for detailed emissions calculations (pages 1 through 2).

Potential To Emit of Modification

Pursuant to 326 IAC 2-1.1-1(16), Potential to Emit is defined as "the maximum capacity of a stationary source to emit any air pollutant under its physical and operational design. Any physical or operational limitation on the capacity of a source to emit an air pollutant, including air pollution control equipment and restrictions on hours of operation or type or amount of material combusted, stored, or processed shall be treated as part of its design if the limitation is enforceable by the U.S. EPA."

This table reflects the PTE before controls for the new emission units. Control equipment is not considered federally enforceable until it has been required in a federally enforceable permit.

Pollutant	Potential To Emit (tons/year)
PM	14.4
PM-10	14.4
SO_2	--
VOC	--
CO	--
NO_x	--

HAP's	Potential To Emit (tons/year)
Chromium	6.55
Nickel	1.86
Cobalt	0.93
TOTAL	9.34

Potential To Emit of Source Before Controls

Pursuant to 326 IAC 2-1.1-1(16), Potential to Emit is defined as "the maximum capacity of a stationary source or emissions unit to emit any air pollutant under its physical and operational design. Any physical or operational limitation on the capacity of a source to emit an air pollutant, including air pollution control equipment and restrictions on hours of operation or type or amount of material combusted, stored, or processed shall be treated as part of its design if the limitation is enforceable by the U. S. EPA, the department, or the appropriate local air pollution control agency."

Pollutant	Potential To Emit (tons/year)
PM	20.5
PM-10	15.0
SO_2	--
VOC	--
CO	--
NO_x	--

HAP's	Potential To Emit (tons/year)
Chromium	6.55
Nickle	5.06

Cobalt	0.93
Others	6.20
TOTAL	18.7

Note: The potential to emit of this source includes the PTE of the existing units permitted in Registration #039-14366-00078, issued August 7, 2001, and the new laboratory spray booths.

(a) The potential to emit (as defined in 326 IAC 2-1.1-1(16)) of criteria pollutants is still less than 100 tons per year. Therefore, the source is not subject to the provisions of 326 IAC 2-7.

(b) The potential to emit (as defined in 326 IAC 2-1.1-1(16)) of criteria pollutants is still less than 25 tons per year. Therefore, the source is not subject to the provisions of 326 IAC 2-6.1.

(c) The potential to emit (as defined in 326 IAC 2-1.1-1(16)) of pollutants are greater than levels listed in 326 IAC 2-1.1-3(d)(1), therefore the source is subject to the provisions of 326 IAC 2-5.5.1.

(d) The potential to emit (as defined in 326 IAC 2-1.1-1(16)) of any single HAP is still less than ten (10) tons per year and/or the potential to emit (as defined in 326 IAC 2-1.1-1(16)) of a combination of HAPs is still less than twenty-five (25) tons per year. Therefore, the source is not subject to the provisions of 326 IAC 2-7.

(e) Fugitive Emissions
Since this type of operation is not one of the twenty-eight (28) listed source categories under 326 IAC 2-2 and since there are no applicable New Source Performance Standards that were in effect on August 7, 1980, the fugitive particulate matter (PM) and volatile organic compound (VOC) emissions are not counted toward determination of PSD and Emission Offset applicability.

County Attainment Status

The source is located in Elkhart County.

Pollutant	Status
PM-10	Attainment
SO_2	Attainment
NO_2	Attainment
Ozone	Maintenance Attainment
CO	Attainment
Lead	Attainment

(a) Volatile organic compounds (VOC) are precursors for the formation of ozone. Therefore, VOC emissions are considered when evaluating the rule applicability relating to the ozone standards. Elkhart County has been designated as attainment or unclassifiable for ozone. Therefore, VOC emissions were reviewed pursuant to the requirements for Prevention of Significant Deterioration (PSD), 326 IAC 2-2 and 40 CFR 52.21.

(b) Elkhart County has been classified as attainment or unclassifiable for all other criteria pollutants. Therefore, these emissions were reviewed pursuant to the requirements for Prevention of Significant Deterioration (PSD), 326 IAC 2-2 and 40 CFR 52.21.

(c) Fugitive Emissions
Since this type of operation is not one of the 28 listed source categories under 326 IAC 2-2, 40 CFR 52.21, or 326 IAC 2-3 and since there are no applicable New Source

Performance Standards that were in effect on August 7, 1980, the fugitive particulate matter (PM) and volatile organic compound (VOC) emissions are not counted toward determination of PSD and Emission Offset applicability.

Potential to Emit After Issuance

The table below summarizes the potential to emit, reflecting all limits, of the significant emission units after controls.

	Potential to Emit After Issuance (tons/year)						
Process/Facility	PM	PM_{10}	SO_2	VOC	CO	NO_X	HAPs
New Spray Booths A and B	14.4	14.4	--	--	--	--	9.34 for Total (1.86 for Nickel)
Existing Units in Registration #039-14366-00078	6.1	0.6	--	--	--	--	9.4 for Total (3.2 for Nickel)
Total Potential to Emit	20.5	15.0	--	--	--	--	18.7 for Total (5.06 for Nickel)
Registration Thresholds	25	25	25	25	100	25	10 for a single HAP and 25 for combined HAPs

The potential to emit of the entire source after adding the new laboratory spray booths is still less than the registration threshold. Therefore, a revised registration, including the new spray booths, will be issued to this source.

Source Status

Existing Source PSD, Definition (emissions after controls, based on 8,760 hours of operation per year at rated capacity and/ or as otherwise limited):

Pollutant	Emissions (ton/yr)
PM	6.1
PM10	0.6
SO_2	---
VOC	—
CO	---
NO_x	—

This existing source is not a major stationary source because no attainment regulated pollutant is emitted at a rate of 250 tons per year or more, and it is not in one of the 28 listed source categories.

Part 70 Permit Determination

326 IAC 2-7 (Part 70 Permit Program)

This existing source is not subject to the Part 70 Permit requirements because the potential to emit (PTE) of:

(a) each criteria pollutant is less than 100 tons per year,

(b) a single hazardous air pollutant (HAP) is less than 10 tons per year, and

(c) any combination of HAPs is less than 25 tons/year.

This status is based on all the air approvals issued to the source.

Federal Rule Applicability

(a) There are no New Source Performance Standards (NSPS)(326 IAC 12 and 40 CFR Part 60) applicable to this source.

(b) The spray booths at this source are laboratory testing units and apply coatings to metal parts, that do not meet the definition of metal furniture. Therefore, the New Source Performance Standards for Surface Coating of Metal Furniture (40 CFR Part 60.310 - 60.316, Subpart EE) are not applicable.

(c) The spray booths at this source are laboratory testing units and apply coatings to metal parts that do not meet the definition of metal coils. Therefore, the New Source Performance Standards for Metal Coil Surface Coating (40 CFR Part 60.460 - 60.466, Subpart TT) are not applicable.

(d) There are no National Emission Standards for Hazardous Air Pollutants (NESHAPs)(326 IAC 14 and 40 CFR Part 63) applicable to this source.

State Rule Applicability - Entire Source

326 IAC 2-2 (Prevention of Significant Deterioration (PSD))

The source was constructed in 1990 and the last modification was in 2002. The source is not in 1 of 28 source categories defined in 326 IAC 2-2-1(p)(1) and has the potential to emit any regulated pollutant before controls less than two hundred and fifty (250) tons per year. Therefore, the requirements of 326 IAC 2-2 are not applicable.

326 IAC 2-4.1 (New Sources of Hazardous Air Pollutants)

The source was constructed prior to July 27, 1997 and has HAP emissions from the entire source less than the major source thresholds. Therefore, the requirements of 326 IAC 2-4.1 are not applicable.

326 IAC 8-6 (Organic Solvent Emission Limitations)

This source was constructed after January 1, 1980 and its potential VOC emissions from the entire source are less than 100 tons per year. Therefore, the requirements of 326 IAC 8-6 are not applicable.

326 IAC 2-6 (Emission Reporting)

This source is located in Elkhart County and the potential to emit VOC or NO_x is less than ten (10) tons per year. Therefore, 326 IAC 2-6 does not apply.

326 IAC 5-1 (Opacity Limitations)

Pursuant to 326 IAC 5-1-2 (Opacity Limitations), except as provided in 326 IAC 5-1-3 (Temporary Alternative Opacity Limitations), opacity shall meet the following, unless otherwise stated in this permit:

(a) Opacity shall not exceed an average of forty percent (40%) any one (1) six (6) minute averaging period as determined in 326 IAC 5-1-4.

(b) Opacity shall not exceed sixty percent (60%) for more than a cumulative total of fifteen (15) minutes (sixty (60) readings) as measured according to 40 CFR 60, Appendix A, Method 9 or fifteen (15) one (1) minute nonoverlapping integrated averages for a continuous opacity monitor) in a six (6) hour period.

State Rule Applicability - Existing Units in Registration #039-14366-00078

326 IAC 6-3-2 (Manufacturing Processes)

(a) Pursuant to 326 IAC 6-3-2(e), the allowable particulate emissions from the air melt atomization tower shall not exceed 2.22 lbs/hr when the process weight rate is 800 lbs/hr.

The pounds per hour limitation was calculated with the following equation:

Interpolation of the data for the process weight rate in excess of sixty thousand (60,000) pounds per hour shall be accomplished by use of the equation:

$E = 4.10\ P^{0.67}$ where E = rate of emission in pounds per hour and
P = process weight rate in tons per hour

The use of Baghouse DC1 with the air melt atomization tower ensures compliance with this limit.

(b) Pursuant to 326 IAC 6-3-2(e), the allowable particulate emissions from the vacuum melt atomization tower shall not exceed 0.8 lbs/hr when the process weight rate is 175 lbs/hr. The pounds per hour limitation was calculated with the equation in (a). The use of Baghouse DC3 with the vacuum melt atomization tower ensures compliance with this limit.

(c) Pursuant to 326 IAC 6-3-2(e), the allowable particulate emissions from the cobalt classifying operation shall not exceed 2.53 lbs/hr when the process weight rate is 975 lbs/hr. The pounds per hour limitation was calculated with the equation in (a). The use of Baghouse DC4 with the cobalt classifying operation ensures compliance with this limit.

(d) Pursuant to 326 IAC 6-3-2(e), the allowable particulate emissions from the iron/nickel classifying operation shall not exceed 2.53 lbs/hr when the process weight rate is 975 lbs/hr. The pounds per hour limitation was calculated with the equation in (a). The use of Baghouse DC5 with the iron/nickel classifying operation ensures compliance with this limit.

(e) The fumehood, the castable rework, and the weld application and testing operations have intermittent operations that handle less than 100 lbs of material per hour. Pursuant to 326 IAC 6-3-2(e)(2), the allowable particulate emissions from each of the fumehood, the castable rework, and the weld application shall not exceed 0.551 lbs/hr. The use of Baghouse DC2 with the fumehood, Baghouse DC6 with the castable rework, and Baghouse DC7 with the welding application ensures compliance with this limit.

State Rule Applicability - Powder Coating Booths (Booths A and B)

326 IAC 8-2-9 (Miscellaneous Metal Coating Operations)

A powder coating application method is used in these booths to apply surface coatings to metal parts. Since no VOCs are used in this application method, these spray coating booths are not subject to the requirements of 326 IAC 8-2-9.

326 IAC 8-1-6 (General Reduction Requirements for VOC Emissions)

There are no VOC emissions emitted from these powder coating booths, therefore, the requirements of 326 IAC 8-1-6 are not applicable.

326 IAC 6-3-2 (Manufacturing Processes)

These spray coating booths apply surface coating using a powder coating application method and do not use any solvents or water based coatings. These coating booths are not considered to be "surface coating" operations as defined in 326 IAC 6-3-1.5(5). Pursuant to 326 IAC 6-3-2(e), the allowable particulate emissions from these spray coating booths shall be limited to the pounds per hour limitation calculated with the following equation:

Interpolation of the data for the process weight rate up to sixty thousand (60,000) pounds per hour shall be accomplished by use of the equation:

$E = 4.10\ P^{0.67}$ where E = rate of emission in pounds per hour and
P = process weight rate in tons per hour

The use of the new baghouse DC8 with spray booths A and B ensures compliance with this limit.

Conclusion

The operation of this metal powder manufacturing plant shall be subject to the conditions of the attached proposed Registration 039-15682-00078.

Appendix A: Emission Calculations
VOC and PM/PM10 Emissions
Two (2) Laboratory Spray Booths with Powder Coating Process

Company Name: Stellite Coatings
Address City IN Zip: 1201 Eisenhower Drive North, Goshen, IN 46526
Registration: 039-15682-00078
Reviewer: ERG/YC
Date: December 3, 2002

Unit ID	Process	Weight % Volatile (H_2O & Organics)	Weight % Water	Weight % Organics	Maximum Usage (lbs/hr)	**Maximum Spray Time (hrs/yr)	Potential VOC (lbs/hr)	Potential VOC (tons/yr)	*PM/PM10 Potential (lb/hr)	*PM/PM10 Potential (ton/yr)	Transfer Efficiency
A	R&D	0.00%	0.0%	0.0%	20	1143	0.00	0.00	17.00	9.72	15%
B	QC	0.00%	0.0%	0.0%	10	1095	0.00	0.00	8.50	4.65	15%
Total								**0.00**		**14.37**	

* Assume all the PM emissions are PM10 emissions.

** The spray time does not include the machine setup time and is provided by the source.

METHODOLOGY

Potential VOC (lbs/hr) = Max. Usage (lbs/hr) * Weight % Organics
Potential VOC (tons/yr) = Max. Usage (lbs/hr) * Weight % Organics * (8760 hr/yr) * (1 ton/2000 lbs)
Potential PM/PM10 (lbs/hr) = Max. Usage (lbs/hr) * (1- Weight % Volatile) * (1-Transfer Efficiency)
Potential PM/PM10 (tons/yr) = Max. Usage (lbs/hr) * (1- Weight % Volatile) * (1-Transfer Efficiency) * Max. Spray Time (hrs/yr) *(1 ton/2000 lbs)

Appendix A: Emission Calculations
HAP Emissions
Two (2) Laboratory Spray Booths with Powder Coating Process

Company Name: Stellite Coatings
Address City IN Zip: 1201 Eisenhower Drive North, Goshen, IN 46526
Registration: 039-15682-00078
Reviewer: ERG/YC
Date: December 3, 2002

Coatings	Maximum Usage (lbs/hr)	* Maximum Spray Time (hrs/yr)	Transfer Efficiency (%)	Weight % Chromium	Chromium Emissions (tons/yr)	Weight % Nickel	Nickel Emissions (tons/yr)	Weight % Cobalt	Cobalt Emissions (tons/yr)
Stelcar 9135	20.0	1095	15%	70.4%	**6.55**	20.0%	**1.86**	0.0%	0.00
Stelcar 9120	20.0	1095	15%	4.0%	0.37	0.0%	0.00	10.0%	**0.93**
****Total**					**6.55**		**1.86**		**0.93**

* The maximum spray time does not include the machine setup time and is provided by the source.

** * Only one type of coating can be applied for each booth at the same time. Therefore, the worst case scenario is using the highest HAP content coating.

Total HAPs **9.34 tons/yr**

METHODOLOGY
HAPs emission rate (tons/yr) = Max. Usage (lbs/hr) x (1- Transfer Efficiency) x Weight % HAP x Max. Spray Time (hrs/yr) x 1 ton/2000 lbs